

Hewlett Packard Docket No.: 200310736-1

PATENT

Remarks

In the office action, claims 1-4 and 9 were rejected under 35 U.S.C. § 102(b) as allegedly being unpatentable in view of U.S. patent 6,237,057 ("Neal"). Claims 5-8 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable in view of Neal and U.S. patent 6,510,529 ("Alexander"). The rejections were issued erroneously and should be withdrawn.

Neal teaches a technique for overcoming load restrictions imposed by the PCI specification so that, instead of the conventional 4 PCI devices, as many as 24 PCI devices may be supported with a single PCI host bridge. Neal at col. 10, lines 29-34. Neal accomplishes this by providing a number of PCI bus extensions (e.g., bus extensions 308, 309) that may be electrically connected to or isolated from a primary PCI bus 204 at appropriate times. For example, Neal explains a scenario in which host bridge 202 has performed a data transfer to PCI slot 304 and next wishes to transfer data to PCI slot 306. To do so, switches 302 are controlled so as to disconnect PCI bus extension 309 from primary PCI bus 204, and to instead connect PCI bus extension 308 to primary PCI bus 204. See Neal at col. 9, line 54 to col. 10, line 14. Doing so enables the PCI devices in slot sets a and b to "see" the primary PCI bus 204 at different times.

The arrangement of Neal cannot provide the functionality that Applicant teaches and does not anticipate Applicant's invention as claimed.

Claim 1. Applicant repeats its claim 1 here for convenience:

1. A configurable I/O bus architecture, comprising:
a system bus interface device;
first and second I/O bus interface devices;
first and second intermediate buses;
a switching device; and

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a steering signal; wherein:

the first intermediate bus couples the system bus interface device to the first I/O bus interface device;

the second intermediate bus couples the system bus interface device to the switching device; and

the switching device is operable to couple the second intermediate bus either to the first or to the second I/O bus interface device responsive to the steering signal.

In the office action, the examiner alleged that Neal's PCI bus extensions 308, 309 correspond to Applicant's first and second intermediate buses, that Neal's PCI host bridge 202 corresponds to Applicant's system bus interface device, that Neal's switches 302 correspond to Applicant's switching device, that devices in Neal's slots 304 and 306 correspond to Applicant's first and second I/O bus interface devices, and that switch enables 316 correspond to Applicant's steering signal.

Applicant's claim 1 requires that the switching device be operable to couple the second intermediate bus either to the first or to the second I/O bus interface device responsive the steering signal. Using the examiner's proposed correspondences, this would require *inter alia* that Neal's switch 302 be operable to couple PCI bus extension 308 either to slot 306 or to slot 304 responsive to switch enables 316. It does not. To the contrary, Neal's switch 302 is only operable to connect PCI bus extension 308 to, or disconnect it from, primary PCI bus 204. Switch 302 never connects bus extension 308 to slot 304, nor does it connect bus extension 308 to slot 306. Rather, bus extension 308 is permanently connected to slot 306. Moreover, to construe Neal as if switch 302 could couple PCI bus extension 308 either to slot 306 or to slot 304 would render Neal inoperable for its intended purpose. As was explained above, Neal's stated purpose is to expand primary PCI bus 204 by alternately connecting slot 304 or slot 306 to bus 204 while simultaneously isolating the

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other. Using switch 302 to couple bus extension 308 to slot 304 would cause the very loading problem that Neal intends to avoid, because this would necessarily couple both of slot sets a0-2 and b0-2 to primary PCI bus 204 simultaneously.

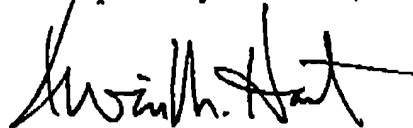
For at least this reason, Neal fails to anticipate Applicant's claim 1 under the standard required by 35 U.S.C. 102(b). Consequently, the rejection under section 102(b) should be withdrawn as to claim 1. Claims 1-9 should then be allowed because no further rejections were made against claim 1, and all other claims depend ultimately from claim 1.

Applicant does not accede to the PTO's characterizations of Neal and Alexander with respect to other elements of claim 1, nor with respect to the other dependent claims pending, and reserves the right to point out other salient distinctions and arguments with respect to those claims and claim elements if it should become necessary to do so.

Conclusion

For at least the above reasons, Applicant respectfully asserts that each of claims 1-9 patentably distinguishes over the prior art of record. Therefore, Applicant requests withdrawal of the rejections under 35 U.S.C. § 102(b) and 103(a) and allowance of claims 1-9.

Respectfully submitted,



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